

## **Project Design Measures 05/18/17**

Mitigation measures are those actions the Forest Service takes to avoid, minimize, rectify, reduce, eliminate, or compensate for environmental impacts caused by the proposed activities. These mitigation measures address site-specific factors about the project that need protection over and above those already built into the design.

**Table 1: Hazard Tree mitigation measures**

<b>Design Feature</b>		<b>Applies to</b>
<b>Aquatics/Watershed</b>		
1	PACFISH default buffers would be used to define timber sale unit boundaries. No timber harvest would occur within 300 feet of fish-bearing streams, 150 feet of perennial non-fish bearing water, wetlands > 1 acre; or 50 feet of intermittent streams, wetlands < 1 acre or landslide prone areas.	Harvest activities
2	Best Management Practices found in Rules Pertaining to the Idaho Forest Practices Act Title 38, Chapter 13, Idaho Code, and Soil and Water Conservation Practices Handbook 2509.22 would be applied to prevent non-channelized sediment delivery from harvest to streams in the project area. These are incorporated by reference.	Harvest activities
3	Scarify and recontour excavated skid trails and excavated landings to restore slope hydrology and soil productivity. Apply available slash to the scarified surface. (Slash is considered available when the equipment is able to reach it from the working area.) Decompact non-excavated skid trails and landings that are compacted or entrenched 3 inches or more, to a depth of 4 to 14 inches to restore soil permeability. Scatter 7-15 tons per acre of slash over recontoured and decompacted areas on skid trails.	Skid trails
4	Contractors would have spill prevention and containment materials on site to minimize the risk of an accidental spill of petroleum products, as well as to protect water courses and aquatic biota from adverse effects in the event of a spill.	All project activities
5	Dust abatement would be used on major haul routes to minimize sediment input to streams from log hauling activities.	Harvest activities
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<b>Soils</b>		

6	Restrict ground activities during wet conditions to limit resource damage (indicators include excessive rutting, soil displacement, and erosion).	All project activities
7	Limit ground based skidding to slopes 35% or less. Ground based equipment may operate on slopes up to 45% for short distances.	Harvest activities
8	Locate and design skid trails, landings and yarding corridors prior to activities to minimize the area of detrimental soil effects. Space tractor skid trails no less than 80 feet apart (edge to edge), except where converging on landings. This does not preclude the use of single pass equipment.	Harvest activities (skid trails, landings, yarding corridors)
9	Restrict equipment used for post-harvest excavator piling to existing trails and/or previously impacted areas, where practical.	Harvest activities and fuels treatments
10	Ensure one-end log suspension when utilizing cable yarding systems.	Harvest activities (cable yarding)
11	Construct drainage controls (waterbars, drain ditches) and apply available slash in log yarding corridors (cable or skyline) upon completion of harvest activities where bare mineral soil is exposed and water flow may be confined.	Harvest Activities
12	Allow winter logging only during frozen conditions. Frozen conditions are defined as adequate frozen ground or snow depth to support equipment with no rutting.	Harvest activities
13	For all harvest units, retain coarse woody material at appropriate levels dependent upon habitat type (Graham et.al. 1994) to provide for nutrient cycling, maintaining soil moisture, soil stability, and other soil physical and biological properties after all unit activities. Regional guidance for organic matter recommends following guidelines, such as retaining coarse (> 3" diameter) woody material to maintain soil productivity. Habitat types within the project area are drier and have wood retention requirements of 7-15 tons/acre.	Harvest activities

### Cultural

14	Known historic properties or sites would be avoided or protected during project implementation.	All ground disturbing project activities
15	If additional cultural resource sites, materials, or artifacts are discovered during project implementation, all ground disturbing activities in that area shall halt until such resources can be properly documented and evaluated by the Forest Archeologist in compliance with 36 CFR 800.13b3.	All ground disturbing project activities

### Wildlife

16	Retain trees with obvious cavities or large stick nests.	Harvest activities
16	Remove all mud, soil and plant parts from off road	All equipment used

equipment before moving into the project area to limit the spread of weeds. Conduct cleaning off National Forest system lands.

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on NFS for all ground disturbing activities

## Project Activity Tables

**Table 2: Silviculture prescriptions Alternative 2**

[illegible]

<sup>a</sup> Greater than 40 acre opening

<sup>b</sup> Combined opening greater than 40 acres

**Table 3: Silviculture prescriptions Alternative 3**

[illegible]

<sup>b</sup> Combined opening greater than 40 acres

[illegible]

<sup>b</sup> Combined opening greater than 40 acres

[illegible]

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<sup>a</sup>Table footnotes are generally lowercase letters so they don't get confused with the data. If table contents are text, use numbers or symbols for footnotes instead.

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